

APPENDIX A

Seventeen tribes and organizations with ties to the NTS have aligned together to form the Consolidated Group of Tribes and Organizations (CGTO). The CGTO was initially informed of the Kistler project in June 1997 by the DOE. CGTO members prepared an American Indian assessment document (Appendix A) to express their opinions and provide comments on the Environmental Assessment. A preliminary draft of the American Indian assessment document was submitted to members of the American Indian Writers Subgroup (AIWS), the DOE, the NTSDC, and the FAA on August 31, 2000.

Following a review of the document, the DOE requested that a meeting between representatives of the AIWS, DOE, and FAA be held in Las Vegas to discuss the document and revise the text for inclusion in the Kistler EA. The document review meeting occurred on September 12, 2000 at the DOE offices in Las Vegas. Attending the meeting was the coordinator of the AIWS, three DOE personnel, FAA/AST staff, and a University of Arizona ethnographer. At the conclusion of the meeting, the FAA and DOE requested that the AIWS provide specific recommendations on how to further proceed with the EA process. The EA reflects the changes and recommendations that were discussed and mutually agreed to during the meeting.

The FAA has included selected comments from this document in the body of the Final EA and has included the full record of all recommendations in this appendix. There are various locations where the EA contradicts or controverts Native American comments regarding environmental impacts. The data presented in the EA are supported by scientific findings whereas the Native American comments are not accompanied by any evidence to support assertions of environmental damage. Therefore these comments, while considered by the FAA in developing the Final EA, are not specifically included in the body of the document but are included in full in this appendix.

This Page Intentionally Left Blank

Appendix A

REVISED DRAFT

**AMERICAN INDIAN ASSESSMENTS
DRAFT ENVIRONMENTAL ASSESSMENT FOR THE SITE, LAUNCH,
REENTRY AND RECOVERY OPERATIONS AT THE KISTLER LAUNCH
FACILITY, NEVADA TEST SITE (NTS)**

Prepared by
American Indian Writers Subgroup
Consolidated Group of Tribes and Organizations

Richard Arnold, Pahrump Paiute Tribe, Pahrump, NV
Jerry Charles, Ely Shoshone Tribe, Ely, NV
Maurice Frank-Churchill, Yomba Shoshone Tribe, Austin, NV
Don Cloquet, Las Vegas Indian Center, Las Vegas, NV
Betty Cornelius, Colorado River Indian Tribes, Parker, AZ
Gaylene Moose, Big Pine Paiute-Shoshone Tribe, Big Pine, CA

with technical assistance provided by
David B. Halmø, MA
Richard W. Stoffle, PhD
Bureau of Applied Research in Anthropology
University of Arizona
Tucson, Arizona

Prepared for
The Consolidated Group of Tribes and Organizations

and

Nick Himaras
Federal Aviation Administration
Office of the Associate Administrator
for Commercial Space Transportation
Washington, DC 20590

August 31, 2000
(revised September 15, 2000)

This document by the American Indian Writers Subgroup (AIWS) of the Consolidated Group of Tribes and Organizations (CGTO) is a summary of Indian opinions expressed regarding the Draft Environmental Assessment (DEA) for the Site Launch, Reentry and Recovery Operations at the Kistler Launch Facility, Nevada Test Site (NTS). The DEA was released on April 4, 2000 (FAA 2000). On April 21, 2000, the FAA published a "Proposed Finding of No Significant Impact" in the Federal Register (65:78, 21495-21498).

The CGTO was initially informed of the Kistler proposal in June of 1997 by the DOE Nevada Operations Office (DOE/NV). CGTO representatives participated in an earlier, rapid cultural assessment study of the proposed Kistler launch facility site.

The Kistler Project Proposal

The focus of this document is American Indian concerns expressed regarding potential adverse impacts to environmental and cultural resources and American Indian values of a proposal by the Kistler Aerospace Corporation to build site, launch, and landing and recovery areas for low-earth orbit communications satellites at a location on the NTS. The Kistler project was explicitly recognized as an appropriate alternative activity on the NTS by the DOE/NV under Alternative 3, Expanded Use, in its 1996 Sitewide Environmental Impact Statement (EIS; DOE 1996).

The U.S. Department of Transportation Federal Aviation Administration's (FAA) Office of the Associate Administrator for Commercial Space Transportation (AST) is the lead agency for the Environmental Assessment process. The U.S. Department of Energy (DOE) is a cooperating agency for the environmental assessment process and will provide land and certain infrastructure to the Nevada Test Site Development Corporation (NTSDC).

This document has two sections. The following two sections provide background information on the involvement of the CGTO in cultural resource and heritage impact studies on NTS lands and the Kistler project to date. This background information is provided to assist CGTO tribal governments and other interested parties in understanding the history and process in the production of this document.

Following the background essay is the section that includes all AIWS text that will be directly added to the EA document under the appropriate heading, section, page and line numbers. The final section presents findings and recommendations deriving from the AIWS review and evaluation of the draft Kistler EA.

Background to American Indian Involvement in DOE/NV Activities on the NTS

For many centuries, the NTS has been a central place in the lives of American Indians. The NTS and nearby lands contain traditional gathering and ceremonial areas of Indian people. From antiquity to contemporary times, this area has been used continuously by many tribes. It contains numerous ceremonial resources and power places that are crucial for the continuation of American Indian culture, religion, and society. Until the mid-1900s, traditional festivals involving religious and secular activities attracted Indian people to the area from as far away as San Bernadino, California. Similarly, groups came to the area from a broad region during the hunting season and used animal and plant resources that were crucial for their survival and cultural practices.

Many non-Indian people hold a different view of these lands. For example, the Federal Government has maintained the perception that the NTS is remote with very low population density and other characteristics that make it ideal for developing a variety of defense, energy, and new technology projects. Because of this remoteness, NTS lands have been withdrawn by the Federal Government since 1943.

Despite the loss of some traditional lands to pollution and reduced access, Indian people have neither lost their ancestral ties to, nor have they forgotten, their cultural resources on the NTS. There is continuity in the American Indian use of and broad cultural ties to the NTS. Indian people have cared for NTS resources and will continue to do so.

The NTS is part of a large cultural landscape that extends many miles in all directions. Because this land is a part and not the whole, it is, therefore, essential that determinations of cultural affiliation, ancestral ties, and impact of NTS actions and programs on traditional Indian culture, religion, and society be made according to the broad regional use of NTS lands.

Recognizing this continuity in traditional ties between the NTS and Indian people, in 1985 the DOE/NV, a cooperating agency in the Kistler project, began long-term research involving the inventory and evaluation of American Indian cultural resources in the area. This research was designed to comply with the American Indian Religious Freedom Act (AIRFA), which specifically reaffirms the First Amendment of the United States Constitution and protects the rights of American Indian people to have access to lands and resources essential in the conduct of their traditional religion. These rights were further reaffirmed in 1996 by Presidential Executive Order 13007, directing Federal agencies to allow Indian access to, and protect the integrity of, Indian sacred sites. These rights are exercised not only in tribal lands, but also beyond the boundaries of a reservation.

To reinforce their cultural affiliation rights and to prevent the loss of ancestral ties to the NTS, 17 tribes and organizations have aligned themselves together to form the CGTO. This group is formed by officially appointed representatives who are responsible for representing their respective tribal concerns and perspectives. The CGTO has established a long-standing relationship with the DOE/NV. The primary focus of the CGTO has been the protection of cultural resources. The DOE/NV and the CGTO have participated in cultural resources management projects spanning fourteen years (AIWS

1996; Arnold et al. 1997, 1998, 1999; Austin 1998; DOE 1996 Stoffle 1987; Stoffle et al. 1988, 1989a, 1989b, 1990a, 1990b, 1990c, 1994, 1996, 2000; Zedeno et al. 1999). These studies are used in this document, along with the collective knowledge of the CGTO, as the basis of the comments in this EA.

The extensive information compiled through long-term research and government-to-government consultation demonstrates that American Indian cultural resources are not limited to archaeological or historical remains of native ancestors, but include all natural resources, as well as geological formations contained in the NTS landscape. Natural resources constitute critical components of American Indian daily life and religious beliefs. Plants and animals are a source of food, raw materials, and medicine. Ritual practices cannot be properly carried out without plants and animals. Similarly, natural landforms mark locations that are significant for keeping the historic memory of American Indian people alive and for teaching children about their culture and history.

This land and its resources are well-known by American Indian people, who consider the NTS as a central part of their cultural landscape. This knowledge has allowed them to be self-sufficient and to transfer their cultural values and practices to future generations to this day.

Background to American Indian Involvement in the Kistler Project

Desert Research Institute (DRI) archaeologists conducted a Class III archaeological reconnaissance of the proposed Kistler launch facility site over a nine-day period between April and June of 1997. The area surveyed totaled 32.16 acres (Holz and Beck 1997). DRI also conducted a Class III reconnaissance for the proposed landing and recovery area along the eastern side of Buckboard Mesa Road in July of 1997. The area surveyed totaled 1,029 acres (Holz and Drollinger 1997). Based on the findings of the reconnaissance at the proposed launch facility site, DRI recommended a data recovery program to mitigate potential adverse impacts of Kistler project construction on the cultural resources at the site. Data recovery was not undertaken at the proposed landing and recovery area, although data recovery activities had been conducted as part of earlier archaeological investigations (Holz and Drollinger 1997).

The DOE/NV notified the CGTO of the pending data recovery program and requested American Indian monitors participate in data recovery activities, in accordance with its American Indian Program. Three Indian monitors, one from the Southern Paiute and two from the Owens Valley Paiute ethnic groups, participated in the data recovery program during September and October of 1997.

Following the archaeological reconnaissance, but prior to the data recovery, a preliminary site visit by CGTO elders was conducted. Three CGTO elders representing the Southern Paiute and Owens Valley Paiute ethnic groups visited the proposed rocket launch site on August 13, 1997, accompanied by a DRI archaeologist and a DOE/NV representative. The preliminary visit was funded by the DOE/NV. Based on their preliminary assessment of the site, the CGTO recommended that there be (1) further consultation with the CGTO, (2) a Rapid Cultural Assessment, (3) a systematic ethnographic study of the site, (4) consideration of the proposed project's potential impacts on nearby

Indian resources, (5) involvement of CGTO representatives in the EA, and (6) direct contact between the CGTO and the FAA about the Indian assessment of the proposed project and its impacts.

Following the preliminary site visit, a Rapid Cultural Assessment (RCA) of the site was conducted. The RCA was funded by the DOE/NV and the Kistler Aerospace Corporation. Over a four-day period in October of 1997, five members of the AIWS, representing each of the three ethnic groups, served as RCA ethnographers to conduct the study and draft the report (Arnold et al. 1998; see annex). The site was visited and assessed on October 29-30, 1997. Technical assistance was provided by two UofA ethnographers, three DRI archaeologists, and one DOE/NV representative for the RCA.

The final RCA report (Arnold et al. 1998) was submitted to the DOE/NV in September of 1998. The DOE/NV distributed the report to the CGTO member tribes, the Kistler Aerospace Corporation and the NTSDC. After the submittal of the final RCA report, the DOE/NV periodically updated the CGTO as to the status of the proposed project during its annual consultation meetings with CGTO representatives as part of its American Indian program.

In August of 2000, the NTSDC agreed to provide funds to the UofA to support a working meeting of the AIWS to review the DEA and produce text for inclusion in the final EA document. The scope of work was modeled after the process of CGTO-AIWS participation in writing American Indian assessments for the NTS-EIS (Richard Stoffle, personal email communication to Robert Furlow, 7/26/00).

AIWS Working Meeting on the Kistler Draft EA

Members of the AIWS met in Tucson, Arizona between August 11-12, 2000 at the Clarion Hotel-Randolph Park to translate into EA language pertinent portions of the 1998 RCA report and draft additional Indian assessment text for inclusion in the Kistler DEA. Funds for this meeting were provided by the NTSDC. On the first day of the meeting, AIWS members reviewed the DEA, along with reports of archaeological investigations conducted at the proposed project launch site (Holz and Beck 1997; Johnson et al, 1999) by the DRI and the American Indian rapid cultural assessment (RCA) report, *Paa'oatsa Hunuvi* (Water Bottle Canyon) (Arnold et al. 1998).

AIWS members and UofA ethnographers were not aware of the existence of an archaeological assessment report for the project's proposed landing and recovery location (Holz and Drollinger 1997) north of Buckboard Mesa, and so were unable to comprehensively evaluate the significance of the site and its cultural resources during the meeting. DOE/NV and NTSDC decided not to conduct data recovery and an American Indian RCA of the proposed landing/recovery area until it was certain that the project would come to the NTS.

On the second day of the meeting, AIWS members drafted text, based on findings from the RCA report. Data from previous American Indian studies conducted on the NTS involving the CGTO were also included as part of the Indian text for inclusion in the EA, using a process known in the

environmental assessment and impact field as *tiering*. UofA ethnographers providing technical assistance to the AIWS produced a preliminary draft of the document in the two week period following the meeting.

American Indian Document Review Meeting: Negotiating Text

A preliminary draft of the American Indian assessment document was submitted to members of the AIWS, the DOE/NV, the NTSDC, and the FAA on August 31, 2000. Following a review of the document, the DOE/NV requested that a meeting between representatives of the AIWS, DOE/NV, and FAA be held in Las Vegas to discuss the the document and revise the text for inclusion in the Kistler DEA. The document review meeting occurred on September 12, 2000 at the DOE/NV offices in Las Vegas. Attending the meeting were the coordinator of the AIWS, three DOE/NV personnel (the American Indian program manager, a NEPA specialist, and the DOE/NV's Kistler project manager), and the Associate Administrator for Commercial Space Transportation of the FAA, who serves as the lead person for the Kistler EA. A UofA ethnographer also attended the meeting to provide technical editorial assistance.

During the nearly all-day meeting, the participants discussed and debated textual portions of the document, and agreements were reached on revisions to be made. In the final portion of the meeting, FAA and DOE/NV representatives requested that the AIWS provide specific recommendations on how to further proceed with the EA process. The present document reflects the changes and recommendations that were discussed and mutually agreed to during the meeting.

The following section presents the AIWS text for direct inclusion into the Kistler EA document.

AMERICAN INDIAN RECOMMENDED TEXT ADDITIONS AND DELETIONS TO SECTIONS OF THE KISTLER PROJECT DRAFT ENVIRONMENTAL ASSESSMENT

This section of the American Indian Assessment Document presents text additions and deletions, drafted by the AIWS members, to the DEA of the Kistler Project. Text entries are delineated by heading, section, page and line number, where appropriate, for ease of reference.

2. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

2.1. Proposed Action

Page 2-1, para. 3, **ADD** at end of paragraph: According to the CGTO Water Bottle Canyon is situated to the north of the proposed Kistler Launch site. After reviewing the entire area, CGTO representatives who conducted the RCA study opined that this narrow canyon with its water bottle offering deserved to be highlighted. The significant features at this site are:

- * bow stave tree
- * water bottle offering (Johnson et al. 1999:7, 112, 150)
- * water fall- stone catchment
- * tonal rock with offering holes (Johnson et al. 1999:7, 150)
- * shovel and washtub hanging in tree (Johnson et al. 1999:113)
- * stone circles - possible astronomical ceremony and teaching site (Johnson et al. 1999:109-111, 150)

According to the CGTO the "Place of Oaks," as this site came to be called during the American Indian RCA study, is within the area where the proposed Kistler Launch facility may be constructed. The Place of Oaks is within what is officially identified as archaeology site number 26NY10133, and described by the DRI archaeologists as a large multi-component site consisting of both prehistoric and historic materials and occupying the complete project area (Holz and Beck 1997:8; Johnson et al. 1999:115). The Place of Oaks is apparently, according to consensus among ethnographic and archaeological researchers--as well as CGTO representatives--the place called *Wungiakuda* by the Indian people interviewed by anthropologist Julian Steward in the mid-1930s (Johnson et al. 1999:8). The significant features observed at this site include:

- * trade pottery fragment
- * blue glass bead--interpreted as a possible burial offering (Johnson et al. 1999:7)
- * oak tree grove
- * numerous Numic pottery fragments and lithics

According to the CGTO Landmark Rock is located across the Pahute Mesa road from the

southeastern corner of the proposed Kistler Launch site. The major feature of this site is what is called on today's maps Landmark Rock; however, the site is perceived by the CGTO as extending across the road into the Kistler Launch site area and to the east into the base of the steep ridge. The place contains the rock shelters where the Indian people were recorded by Steward as spending the winter. Steward spelled the name of the place as Wungiakuda, but did not provide a translation of the word (Steward 1938:94-95). He recorded the camping area as being near a large standing rock called *Tavondówáyo*, which was translated as "standing rock."

Landmark Rock is seen by the CGTO as being Standing Rock as it was discussed in the mid-1930s Indian interviews by Steward. One CGTO representative suggested the name given to Steward was *Wingkadzaigarre*, which means "standing or sitting in the open." The name implies that the rock was alive because it was sitting or standing rather than just being on the ground. Such large standing, boulder-type rocks are often seen as powerful people who have a responsibility for protecting places and Indian people. The significant features observed at this site are:

- * *Wingkadzaigarre*--the white rock, Landmark Rock
- * rock shelters with historic Indian structures inside
- * plants
- * arrow points

According to the CGTO West Canyon is located approximately 1/4 mile to the north of the proposed Kistler Launch site area. The canyon does not have a name on the USGS quads and the Indian people did not assign it one. The canyon trends generally north and west until where it being on the ridge between the study site's greater valley and Big Burn Valley. Jim Wilson's Camp is a name assigned by the DRI archaeologists to a historic period camp on the ridge between West Canyon and Water Bottle Canyon. Jim Wilson is a member of the Chemehuevi Indian tribe in California and was serving at the time he discovered this site as an American Indian monitor. This site is among many on the ridge, but it contains number items from the turn of the century. The significant features observed at this site are:

- * bow trees
- * rock wall
- * pine nut trees
- * broken Dutch Oven, hematite-stained grinding stone fragments, and white button--evidence of possible funeral ceremony
- * contemporary Indian stone house (*Tumpikani*)
- * offering holes at natural pot hole waterfall

Page 2-1, para. 4, **ADD** at end of paragraph: According to the CGTO, the Buckboard Mesa area contains a wide range of important cultural resources, including plants, animals, archaeological sites, minerals, and power places. Three ethnoarchaeological site visits have been conducted in this area. One study was focused on a power rock and a series of petroglyph panels located at the southern end of Buckboard Mesa (Stoffle et al. 1994) and the second study included a visit to rock shelters containing

obsidian nodules, artifacts, and Indian rock paintings. The third study included a comprehensive American Indian interpretive inventory of the rock art panels at Buckboard Mesa as part of a larger rock art study (Zedeno et al. 1999:35-46). The area was also visited as part of a Native American Graves Protection and Repatriation Act (NAGPRA) consultation to determine the disposition of seven obsidian projectile points under the provisions of NAGPRA (Stoffle, Halmo and Dufort 1994:76-82; Stoffle et al. 1996:66). To the north of Buckboard Mesa is an extensive area of obsidian nodules which are significant in many ways to Indian people. Scrugham Peak, a volcanic cone, was preliminarily identified by Indian people as a place of traditional power and ceremony. The mesa is considered to be a power source where people obtained songs and conducted ceremonies, some of which concerned the making of arrow points and incorporated the use of arrow points in the ceremonies. A full cultural assessment of this place and its role in the Buckboard Mesa area awaits systematic American Indian traditional property studies. While some American Indian studies have been conducted in this area, only a few archaeological sites have been assessed. There have been no systematic studies of plants, animals, and traditional cultural properties. The culturally significant features of Buckboard Mesa include:

- * the doctor rock, or power rock
- * a quarry of obsidian toolstone nodules, used in ceremonies for arrowmaking and using arrows in other ceremonies
- * extensive rock art panels
- * several rockshelters with rock paintings on the walls
- * vision quest cairns and grinding slabs on the top of the mesa
- * the nearby Scrugham Peak, a sacred volcanic cone

Based on an archaeological reconnaissance of the proposed location in July of 1997, DRI determined in consultation with the Nevada State Historic Preservation Officer (NSHPO) that site 26NY4892, the western portion of which will be bladed to create the Kistler vehicle landing and recovery area, is eligible for nomination to the National Register of Historic Places (NRHP) under criterion d of 36 CFR Part 60.4 (Holz and Drollinger 1997:4, 15).

2.1.1. Alternatives Considered but Not Evaluated

Alternative 3: The Preferred Alternative

2.2. Description of the Proposed Commercial Launch and Reentry Activities

Page 2-8, para. 1, **ADD** following third “bullet”: According to the CGTO, the locations proposed for both the launch facility and the landing/recovery area are sites of extremely high cultural and religious significance to Indian people.

2.3.1. Construction and Site Preparation

Page 2-28, **ADD** following paragraph 3: Because construction necessarily brings people, and some of the people have displayed a tendency not to stay within artificially bounded areas, the AIWS has concerns about foot traffic damage to cultural resources found in the surrounding area. Concerns about damage to surrounding areas in the course of a pre-approved construction activity have in the past been a concern. According to the CGTO, based on previous experience, that vehicle and foot traffic of construction crews often expands beyond the “footprint” of the project site, that may have adverse effects for Indian cultural resources. In the late 1960s, DRI archaeologist Richard Brooks (n. d.:33) observed and documented vandalism to Hot Creek Valley sites as a result of the expansion of the Central Nevada Test Area (then called the Central Nevada Test Site).

3. AFFECTED ENVIRONMENT AND DESCRIPTION OF ENVIRONMENTAL BASELINE

3.1. Overview of Proposed Operational Area

Page 3-1, **ADD** following paragraph 2: According to the CGTO, Water Bottle Canyon is situated to the north of the proposed Kistler Launch site. After reviewing the entire area, CGTO representatives who conducted the RCA study opined that this narrow canyon with its water bottle offering deserved to be highlighted. The significant features at this site are:

- * bow stave tree
- * water bottle offering (Johnson et al. 1999:7, 112, 150)
- * water fall- stone catchment
- * tonal rock with offering holes (Johnson et al. 1999:7, 150)
- * shovel and washtub hanging in tree (Johnson et al. 1999:113)
- * stone circles - possible astronomical ceremony and teaching site (Johnson et al. 1999:109-111, 150)

According to the CGTO, the “Place of Oaks,” as this site came to be called during the American Indian RCA study, is within the area where the proposed Kistler Launch facility will be constructed. The Place

of Oaks is within what is officially identified as archaeology site number 26NY10133, and described by the DRI archaeologists as a large multi-component site consisting of both prehistoric and historic materials and occupying the complete project area (Holz and Beck 1997:8; Johnson et al. 1999:115). The Place of Oaks is apparently, according to consensus among ethnographic and archaeological researchers--as well as CGTO representatives--the place called *Wungiakuda* by the Indian people interviewed by anthropologist Julian Steward in the mid-1930s (Johnson et al. 1999:8). The significant features observed at this site include:

- * trade pottery fragment
- * blue glass bead--interpreted as a possible burial offering (Johnson et al. 1999:7)
- * oak tree grove
- * numerous Numic pottery fragments and lithics

According to the CGTO, Landmark Rock is located across the Pahute Mesa road from the southeastern corner of the proposed Kistler Launch site. The major feature of this site is what is called on today's maps Landmark Rock; however, the site is perceived by the CGTO as extending across the road into the Kistler Rocket Launch site area and to the east into the base of the steep ridge. The place contains the rock shelters where the Indian people were recorded by anthropologist Julian Steward as spending the winter. Steward spelled the name of the place as *Wungiakuda*, but did not provide a translation of the word (Steward 1938:94-95). He recorded the camping area as being near a large standing rock called *Tavondówáyo*, which was translated as "standing rock."

Landmark Rock is seen as being Standing Rock as it was discussed in the mid-1930s Indian interviews by Steward. One CGTO representative suggested the name given to Steward was *Wingkadzaigarre*, which means "standing or sitting in the open." The name implies that the rock was alive because it was sitting or standing rather than just being on the ground. Such large standing, boulder-type rocks may often be viewed by American Indians as powerful people who have a responsibility for protecting places and Indian people. The significant features observed at this site are:

- * *Wingkadzaigarre*--the white rock, Landmark Rock
- * rock shelters with historic Indian structures inside
- * plants
- * arrow points

According to the CGTO, West Canyon is located approximately 1/4 mile to the north of the proposed Kistler Launch site area. The canyon does not have a name on the United States Geological Survey (USGS) topographic maps and the Indian people did not assign it one. The canyon trends generally north and west **lying between** the study site's greater valley and Big Burn Valley. Jim Wilson's Camp is a name assigned by the DRI archaeologists to a historic period camp on the ridge between West Canyon and Water Bottle Canyon. Jim Wilson is a member of the Chemehuevi Indian tribe in California and was serving at the time he discovered this site as an American Indian monitor. This site is among many on the ridge, but it contains a number of items from the turn of the century. The significant features observed at this site are:

- * bow trees
- * rock wall
- * pine nut trees
- * broken Dutch Oven, hematite-stained grinding stone fragments, and white button-evidence of possible funeral ceremony
- * contemporary Indian stone house (*Tumpikani*)
- * offering holes at natural pot hole waterfall

According to the CGTO, the Buckboard Mesa area contains a wide range of important cultural resources, including plants, animals, archaeological sites, minerals, and power places. Three ethnoarchaeological site visits have been conducted in this area. One study was focused on a power rock and a series of petroglyph panels located at the southern end of Buckboard Mesa (Stoffle et al. 1994) and the second study included a visit to rock shelters containing obsidian nodules, artifacts, and Indian rock paintings. The third study included a comprehensive American Indian interpretive inventory of the rock art panels at Buckboard Mesa as part of a larger rock art study (Zedeno et al. 1999:35-46). The area was also visited as part of a NAGPRA consultation to determine the disposition of seven obsidian projectile points under the provisions of NAGPRA (Stoffle, Halmo and Dufort 1994:76-82; Stoffle et al. 1996:66). To the north of Buckboard Mesa is an extensive area of obsidian nodules which are significant in many ways to Indian people. Scrugham Peak, a volcanic cone, was preliminarily identified by Indian people as a place of traditional power and ceremony. The mesa is considered to be a power source where people obtained songs and conducted ceremonies, some of which concerned the making of arrow points and incorporated the use of arrow points in the ceremonies. A full cultural assessment of this place and its role in the Buckboard Mesa area awaits systematic American Indian traditional property studies. While some American Indian studies have been conducted in this area, only a few archaeological sites have been assessed. There have been no systematic studies of plants, animals, and traditional cultural properties. The culturally significant features of Buckboard Mesa include:

- * the doctor rock, or power rock
- * a quarry of obsidian toolstone nodules, used in ceremonies for arrowmaking and using arrows in other ceremonies
- * extensive rock art panels
- * several rockshelters with rock paintings on the walls
- * vision quest cairns and grinding slabs on the top of the mesa
- * the nearby Scrugham Peak, a sacred volcanic cone

Based on an archaeological reconnaissance of the proposed location in July of 1997, DRI determined in consultation with the NSHPO that site 26NY4892, the western portion of which will be bladed to create the Kistler vehicle landing and recovery area, is eligible for nomination to the NRHP under criterion d of 36 CFR Part 60.4 (Holz and Drollinger 1997:4, 15).

3.4. Air Quality

Page 3-13, **ADD** following paragraph 2 (above *Existing Conditions*): Indian people express the belief that the air is alive. There are different kinds of air with different names in Indian languages. The Creator puts life into the air which is shared by all living things. When a child is born, they pull in the air to begin its life. The mother watches carefully to make sure that the first breath is natural and that there is no obstruction in the throat. It is believed that if the day of birth is a windy day, it is a good day and the child will have a good life.

But air can be destroyed. There is only so much alive air which surrounds the world. If you kill the living air, it is gone forever and cannot be restored. Dead air lacks the spirituality and life necessary to support other life forms. Airplanes crash when they hit dead air. One member of the CGTO compared this Indian view of killing air with what happens when a jet flies through the air and consumes all of the oxygen, producing a condition where another jet cannot fly through the air. The CGTO believes that much of the air on the NTS has already been killed as a result of years of nuclear testing (DOE 1996: Volume 1, Appendix G, page G-26).

3.5. Noise

Page 3-19, **ADD** following paragraph 4 under *Existing Conditions*: A considerable number of Indian people live in rural areas and are extremely sensitive to drastic changes in noise levels. Traditionally, all activities were carried out in a routine manner of calmness. General well-being of the people was partly enhanced by the control of noise. Indian people derive great aesthetic satisfaction from listening to sounds of the wind, rain, flowing water and wildlife such as hawks and other birds, as well as overall silence in various topographical and ecological zones. Listening to nature is part of Indian spirituality and meditation in the process of enjoying the environment and creation. Listening is also a matter of respect when visiting a particular location, especially locations where praying and ceremonial or funerary activities occurred. It is not only a matter of respect for creation, but also for the spirits and ancestors who have gone before. Traditionally, there were cultural rules regarding noise in human conduct. Children did not talk while adults were talking, and were prohibited from being noisy in camp. Learning was accomplished largely by observation. To some degree, people were bonded by silence as a matter of respect. Silence is a way of learning from nature.

Today, Indian people are bombarded by traffic on paved roads, trains, commercial jets and other intrusive sounds. Many Indian people have experienced shock and property damage as a result of low-altitude commercial and military aircraft flyovers. Such flyovers and associated sonic booms have also disturbed tribal animal herds and wildlife.

3.6. Socioeconomic Review

Environmental Justice Considerations.

Page 3-23, **ADD** below Table 3.10: Federal Agencies are directed by Executive Order 12898 to

detect and mitigate potentially disproportionately high and adverse environmental effects of planned programs and activities to promote non-discrimination among various populations in the United States. According to the CGTO, three violations of this Order that have derived from past NTS programs, policies and activities (DOE 1996: Appendix G). Because no actions have been taken on these violations, they are reiterated here. The violations are (1) holy land violations, (2) health violations, and (3) cultural survival-access violations. **The CGTO believes that the Kistler Project could potentially result in one or more of these violations.** Evidence for each of these violations varies. Only the holy lands of Indian peoples have been, continue to be, and will be impacted by NTS actions. Only Indian people have lost cultural traditions because access to places on the NTS has been restricted where ceremonies used to and need to occur, where plants used to and need to be gathered, and where animals used to and need to be hunted in a traditional way. American Indian people who belong to the CGTO consider the NTS lands to be central in their lives today as these lands have been since creation. The NTS lands are part of the holy lands of Owens Valley Paiute, Western Shoshone, and Southern Paiute peoples. In the Indian view documented in the NTS-EIS (DOE 1996: Volume 1, Appendix G), these holy lands have been polluted and their resources damaged by long-term activities. The CGTO believes that the past, present, and future pollution of these holy lands constitutes both Environmental Justice and equity violations. No other people have had holy lands impacted by NTS-related environmental pollution and damage.

One of the most adverse consequences of NTS operations for the survival of American Indian culture, religion, and society has been the restriction of access to their traditional lands and resources. Loss of access to traditional foodstuffs and medicine have greatly contributed to undermining the cultural well-being of Indian people. These Indian people have experienced, and will continue to experience, breakdowns in the process of cultural transmission due to lack of access to NTS lands and resources. No other people have experienced similar cultural survival impacts due to lack of access to the NTS. Recently, the DOE has accepted a CGTO recommendation to open access for American Indians who must conduct their traditional ceremonies and obtain resources within NTS lands, provided that these lands are not contaminated; areas set aside for Indian use would be cleaned up. Unfortunately, land disturbance and irreparable contamination of the soil and underground water may render many locations unsuitable for traditional cultural and religious purposes.

According to the CGTO, a systematic evaluation of traditional places within the NTS has not been made by Indian people; therefore, no specific statements about access to particular locations can be made at this time. An important exception is the recommendation of the CGTO that the Gold Meadows area be set aside for exclusive Indian use because it contains a concentration of important cultural resources. The DOE/NV has acknowledged the importance of this area to Indian people and will make every effort to protect it.

There has not been a systematic study of these issues for any of the NTS areas important to Indian people. The CGTO maintains that past, present, and future activities on the NTS have, are, or will disproportionately impact the American Indian people.

3.7. Visual Resources

Page 3-25, **ADD** following paragraph 1 under *Existing Visual Resource Conditions*: Many landforms within the NTS have high sensitivity levels for American Indians. The ability to see the land without the distractions of buildings, towers, cables, roads, and other objects is essential for the spiritual interaction between Indian people and their traditional lands. Indian people have traveled this landscape for centuries. Landforms and other topographical features served as points on a mental map which guided Indian people to various locations for a variety of secular and religious activities.

3.8. Biological Resources

Vegetation

Page 3-29, **ADD** following paragraph 1, above *Wildlife*: A number of plant species on the NTS are currently listed as species of concern by the U.S. Fish and Wildlife Service. The CGTO has compiled a list of 364 American Indian traditional use plants present on the NTS (DOE 1996: Volume 1, Appendix G, Attachment A). Of the 46 plants listed in Table 3-11 as observed at the proposed lunch site, at least 20 (43%) are Indian traditional use plants. Approximately 14 (70%) of the 20 plants listed in Table 3-12 as observed at the proposed landing and recovery area are Indian traditional use plants.

Wildlife

Page 3-29, **ADD** following paragraph 4 under *Wildlife*: **A number of plant species on the NTS are currently listed as species of concern by the U.S. Fish and Wildlife Service.** Projects and activities on the NTS have impacted to some degree on some of the region's animal species. The CGTO has compiled a list of 170 traditional use animals present on the NTS (DOE 1996: Volume 1, Appendix G, Attachment B). All of these animals **are** present at the launch site and landing/recovery **and may be affected by project activities.**

Although systematic traditional-use plant studies and preliminary assessments of traditional use animals have been conducted at Yucca Mountain, Pahute Mesa and Rainier Mesa, American Indians would like further involvement in assisting in the planning and implementing of ecosystem management programs at the NTS as outlined in the NTS-EIS and NTS RMP.

3.11. Geology and Soils

Page 3-36, **ADD** following paragraph 2, above Section 3.11: **According to the CGTO, potential surface and/or subsurface disturbance to the soils at the recovery zone could render the area unsuitable for traditional cultural and/or religious purposes.**

3.12. Cultural and Native American Resources

Native American Cultural Resources.

Page 3-38, **ADD** text presented below above paragraph 1:

Ethnographic Basis for Cultural Significance of the Launch Site

The "Indian definition" of the Kistler launch site includes at least four locations, which are (1) *Paa'oatsa Hunuvi* (Water Bottle Canyon), a narrow canyon with a water bottle offering immediately to the north of the construction area; (2) the "Place of Oaks" (26NY10133), an area where there are stands of oak trees directly within the proposed Kistler launch study site; (3) Landmark Rock, a dominant large white rock and its surrounding area in proximity to but outside of the project area; and (4) West Canyon, a narrow canyon immediately to the north of the project area and the high ridge between it and Water Bottle Canyon to the east.

Indian cultural definitions of place, and their assessment of potential place impacts, are broader and more encompassing than those of archaeologists and agencies. While three of the areas are not within the launch site construction area, what affects the launch site affects the other sites in the same manner that one part of a body affects another.

Interviews conducted in 1935 and 1936 by Julian Steward describe the remembered uses and

meanings of the place that corresponds to the area around the proposed Kistler Launch site. In describing camp sites from the Belted Range to Beatty, Steward identified one just east of Ammonia Tanks at about 6,000 feet. Based upon this description and Steward's maps, the RCA team members, the UofA ethnographers, and the DRI archaeologists believe the area of the Kistler study site traditionally was called *Wungiakuda* (no translation provided by Steward). *Wungiakuda* was described as being near a rock shelter called *Tavondówâyo* (standing rock) that was lived in during the winter months and visited for seed gathering in the summer (Steward 1938: 94-95). Using contemporary linguistic analysis *Wungiakuda* probably means "oak sitting" or "oaks remaining" or "a lot of oaks there" and would be written today as *Kwingakare* (D. Shaul 1997, personal correspondence). Taking all these factors into account, there seems little doubt to the RCA team that the proposed Kistler Launch site is a part of the area once called *Wungiakuda*.

The Fall festival, most often a large social gathering that included annual ceremony, was, according to Steward (1938:98)

held either at Wungiakuda where Wanga^gwana was director, or at Beatty where Tst's paternal grandfather was director...The Wungiakuda festival was held during pine-nut time, and before the rabbit drive, probably in October...The festival lasted 5 days. *Wanga^gwana* and an old man from Oak Springs or other chiefs, depending on where the festival was held, talked from time to time. The first night there was an exhibition dance, performed by visitors who were paid by their hosts. The second to fifth nights were given over to the round dance, *wegi* (round) *nuk:ep* (dance), after which people dispersed.

Steward (1938:184) documents that, among Pahrump and Las Vegas Paiute people

The annual fall festival...lasted 3 or 4 days and *terminated with mourning rites*. It was planned and directed by the local chief, who had it announced 6 or 8 months in advance. While the dance and rites were in progress the chief made speeches from time to time. Amusements included the circle dance...and two special dances. *On the last night buckskins and other property, which had been accumulated, was burned for persons who had died within the year.* (emphasis added)

Among Shoshones of eastern California, Steward (1938:74) noted

The fall festival, which included the circle dance, gambling, and *annual mourning observances, was the only noneconomic motive for large numbers of persons to assemble. There were no other group ceremonies*. The fall festivals, however, were annual events, enlisting people from a considerable territory. (emphasis added)

Steward recorded that Owens Valley Paiutes also had fall festivals and an annual mourning ceremony, also held in the fall (1938:54-55).

Steward (1938:237) emphasized the social and other non-economic (including religious and ceremonial) aspects of the fall festivals:

The more important social determinants producing cohesion in large groups were *festivals*, [and] *the sweat house*...The essential motivation of festivals...was noneconomic. People desired social intercourse with friends and relatives rarely seen during the remainder of the year. They wished to dance and gamble, *and, in some localities, to hold religious observances*...Owens Valley bands seemingly held special gatherings for festivals. In providing an extra occasion for band activity, festivals enhanced band solidarity. But, as neighboring bands were often invited, temporary organization greater than the band was sometimes achieved...some *mourning ceremonies among Southern Paiute effected some group solidarity*. (emphasis added)

There is abundant evidence that the proposed Kistler Launch site is part of the traditional site called *Wungiakuda*. *Wungiakuda* was a place where Indian people continued to live until the Twentieth Century, when the dispersal of family members occurred due to a number of unknown factors. In the late 19th Century, the site was occupied on a full time basis and served as a place where people from the region wanted to visit for various reasons, including seed gathering. It was the home (perhaps one of the homes) of “*Wanda^swana (?+da^swana, chief)*,” or *Wangagwana*, who was known as “*chief of this general region*” (Steward 1938:95, emphasis added). It was the birth place and early residence of *Wangagwana*’s son who the non-Indians called Panamint Joe and who the Indian people considered as “Chief of the Shoshone” during the Rhyolite mining boom about 1906 (Steward 1939:95). *Wungiakuda* was a place to visit for hunting, gathering, trade, and ceremony in the late 19th Century. In summary, *Wungiakuda* was:

- (1) a place of full time residence
- (2) a place where regional chiefs lived and directed fall festivals, including annual ceremonies (Steward 1938:95, 98, 184)
- (3) a place where people came for major annual ceremonies (Steward 1938:54-55, 74, 98, 184, 237), and
- (4) a place that had steadily attracted Indian people for at least 11,000 years ago.

It is, in other words, a place that is highly culturally significant to the Indian people of the region (see Arnold et al. 1998, attached as annex A, for more detailed discussions).

Indian responses and the findings presented in DRI archaeology reports (Holz and Beck 1997; Johnson et al. 1999:1, 8, 19-20, 34-35) generally agree with the substance of ethnographic observations and conclusions. The DRI reports concluded that the site (26NY10133) is eligible for listing on the National Register of Historic Places (NRHP) under criterion d of 36 CFR Part 60.4 (Holz and Beck 1997:16; Johnson et al. 1999:1). The ethnographic evidence seems sufficient to successfully nominate *Wungiakuda* to the NRHP as a Traditional Cultural Property under Criterion A. Inasmuch as the boundary delineation for a Traditional Cultural Property is primarily the responsibility of the Indian people, *Wungiakuda* would certainly include the two canyons to the north and Landmark Rock to the

southeast (NRB38:16-19). In lieu of nominating the area to the NRHP as a TCP, the AIWS has determined that the Kistler launch site, including 26NY10133, is a sacred site under Presidential Executive Order 13007.

Page 3-38, **ADD** text below following portion of paragraph 1, line 6 that ends “(CGTO in DOE, 1996)”:

According to the CGTO, the Buckboard Mesa area, including the proposed Kistler landing and recovery area, contains a wide range of important cultural resources, including plants, animals, archaeological sites, minerals, and power places. Three ethnoarchaeological site visits have been conducted in this area. One study was focused on a power rock and a series of petroglyph panels located at the southern end of Buckboard Mesa (Stoffle et al. 1994) and the second study included a visit to rock shelters across Buckboard Mesa Road from site 26NY4892 containing obsidian nodules, artifacts, and Indian rock paintings on the escarpment and the top of the mesa as part of a NAGPRA consultation to determine the disposition of seven obsidian projectile points under the provisions of NAGPRA (Stoffle, Halmo and Dufort 1994:76-82; Stoffle et al. 1996:66). The third study included a comprehensive American Indian interpretive inventory of the rock art panels at Buckboard Mesa as part of a larger rock art study (Zedeno et al. 1999:35-46). To the north of Buckboard Mesa is an extensive area of obsidian nodules which are significant in many ways to Indian people. Scrugham Peak, a volcanic cone, was preliminarily identified by Indian people as a place of traditional power and ceremony. The mesa is considered to be a power source where people obtained songs and conducted ceremonies, some of which concerned the making of arrow points and incorporated the use of arrow points in the ceremonies. A full cultural assessment of this place and its role in the Buckboard Mesa area awaits systematic American Indian traditional property studies. Based on an archaeological reconnaissance of the proposed location in July of 1997, DRI determined in consultation with the NSHPO that site 26NY4892, the western portion of which will be bladed to create the Kistler vehicle landing and recovery area, is eligible for nomination to the NRHP under criterion d of 36 CFR Part 60.4 (Holz and Drollinger 1997:4, 15).

Page 3-38, paragraph 1, line 8, beginning “The tribal representatives expressed...” **DELETE** “some general concern” and **REPLACE** with “a high level of concern...”

Page 3-38, **ADD** following the last line of existing paragraph 1, ending with “measures.”:

The RCA team members expressed two mitigation scenarios for the launch site only. The first scenario assumed the project would go forward. The second scenario took into account any delay in project construction. Recommendations for the first scenario were (1) that construction should be preceded by Indian prayers; (2) that construction should be preceded by an American Indian Cultural Resource Mitigation Plan, which would identify items of greatest cultural significance that would be directly impacted by project construction activities and recommend mitigation actions for those items, developed by the RCA team and approved by the CGTO; (3) construction should be preceded by archaeological examination of those areas to be disturbed, and the disposition of all Indian surface artifacts should be determined in consultation with the CGTO, with Indian monitors as part of the

archaeology teams; (4) construction should be preceded by the development of an Indian Cultural Monitoring Plan which is designed and operated over a period of time by representatives of the CGTO; (5) construction should be accompanied by Indian monitors and workers with NAGPRA indicator item training; (6) all areas surrounding the Kistler Launch facility should be placed off-limits; (7) access to these surrounding areas should continue to be assured for Indian people interested in conducting ceremony or youth education; and (8) an ongoing American Indian monitoring program should be established for tracking the condition of critical cultural resources surrounding the Kistler Launch facility (Arnold et al. 1998:67-69).

Recommendations given in the event of the second scenario were: (1) Indian people would like to have the opportunity to conduct a full ethnographic study of this location and its placement in a broader cultural landscape, involving (a) bringing religious leaders to the site for special assessment through conducting a ceremony; (b) bringing to the site a Shoshone elder who was born and raised nearby at Ammonia Tanks. He is the oldest living person with direct ties to the site; (c) bringing knowledgeable elders from each of the 17 CGTO tribes to the site for the identification and evaluation of cultural resources at the site; and (d) Indian participation in developing, researching, and writing any environmental studies of the Kistler project that may be conducted in the future (Arnold et al, 1998:69-70).

5. ENVIRONMENTAL CONSEQUENCES OF THE ALTERNATIVES

5.1. Proposed Action Area

5.1.2 Land Use

Page 5-5, paragraph 2, last line of paragraph, **DELETE** “Surrounding land uses are not expected to be affected by the proposed action.”

Page 5-5, **ADD** text presented below above the paragraph beginning “The National Security Mission...”

The RCA team members expressed their opinions regarding whether or not the launch facility should be built on the site. These opinions were (1) the site should not be destroyed by the construction of the Kistler Launch facility because (a) the site is a portion of a larger Indian cultural site, or Traditional Cultural Property, that should be nominated for the National Register of Historic Places, and is also potentially protectable under Section 106 of the NHPA as amended, the AIRFA, NAGPRA, and E.O. 13007; (b) the associated area potentially has critical scientific data for answering important questions as to why Indian people repeatedly visited this location over 11,000 years; (c) the associated area potentially has an Indian burial, or was the location of an Indian funeral ceremony, evidenced by a blue bead of the type that has previously been identified as a NAGPRA indicator item; (d) the associated area is a place where a series of historic events that are culturally significant to the cultural traditions of the Indian people of this region occurred; (e) the associated area is a place containing archaeology sites that may uniquely contain answers to contemporary cultural questions about past Indian lives and who was living at this location; (f) the associated area is a place where feeling, topography, and cultural landscape were a part of its cultural significance; and (g) the associated area is surrounded by tonal rocks, ceremonial structures, and *Wingkadzaigarre*, a unique geological formation that is a power rock in a powerful place.

The RCA team members expressed their opinions regarding whether or not the proposed facility would or could influence the three neighboring Indian sites. These opinions were (2) the launch facility site area is a portion of three neighboring areas, such that a modification of one area potentially impacts all areas according to Indian world view. These neighboring impacts are (a) the Kistler Project would bring people to the site and these people could visit and possibly disturb the archaeological materials of the overall site; (b) the Kistler project would cause noise which would disturb the feeling of the overall area, potentially impact ceremonies that involve tonal rocks and thus sound and acoustic clarity; and (c) the Kistler project would visually disturb neighboring areas that were traditionally used.

5.1.3 Air Resources

Page 5-27, **ADD** following paragraph 2, above **5.1.4 Noise**: Indian people express the belief that the

air is alive. But air can be destroyed. There is only so much alive air which surrounds the world. If you kill the living air, it is gone forever and cannot be restored. Dead air lacks the spirituality and life necessary to support other life forms. The CGTO believes that much of the air on the NTS has already been killed as a result of years of nuclear testing (DOE 1996: Volume 1, Appendix G, page G-26). Exhaust, emissions, and pollutants from sustained rocket launches will kill the air and adversely affect the project location.

5.1.4. Noise

Page 5-42-43, **DELETE** last two lines of paragraph 3, Beginning with “Although this impact...” and ending with “and have minimal impact.” under **Summary of Noise Impacts** and **REPLACE** with: The Kistler Project would cause noise from sustained launches, associated sonic booms during launch and reentry, and additional reentry noise which would disturb the feeling of the overall area, potentially impact ceremonies that involve tonal rocks and thus sound, and potentially disrupt Indian people, property, and tribal herds in nearby localities, as well as disrupt the plants and animals of the area on the NTS proposed for the launch and landing/recovery sites.

5.1.5. Socioeconomics

Page 5-44, **DELETE** last line of paragraph 3 above **5.1.6 Visual Resources** which reads “In addition, no disproportionate effects on economically disadvantaged or minority groups are anticipated as a result of the proposed action.” and **ADD Environmental Justice Considerations** section and the following text:

During the preparation of the American Indian Resource Document for the NTS-EIS, the CGTO identified three violations of Executive Order 12898 that have derived from past NTS programs, policies and activities. These are (1) holy land violations, (2) health violations, and (3) cultural survival-access violations. Only the holy lands of Indian peoples have been, continue to be, and will be impacted by NTS actions. Only Indian people have lost cultural traditions because access to places on the NTS has been restricted where ceremonies used to and need to occur, where plants used to and need to be gathered, and where animals used to and need to be hunted in a traditional way. American Indian people who belong to the CGTO consider the NTS lands to be central in their lives today as these lands have been since creation. The NTS lands are part of the holy lands of Owens Valley Paiute, Western Shoshone, and Southern Paiute peoples. In the Indian view documented in the NTS-EIS, these holy lands have been polluted and their resources damaged by long-term activities. The CGTO believes that the past, present, and future pollution of these holy lands constitutes both Environmental Justice and equity violations. No other people have had holy lands impacted by NTS-related environmental pollution and damage.

One of the most adverse consequences of NTS operations for the survival of American Indian culture, religion, and society has been the restriction of access to their traditional lands and resources. Loss of access to traditional foodstuffs and medicine have greatly contributed to undermining the cultural well-being of Indian people. These Indian people have experienced, and will continue to experience,

breakdowns in the process of cultural transmission due to lack of access to NTS lands and resources. No other people have experienced similar cultural survival impacts due to lack of access to the NTS. Land disturbance and irreparable contamination of the soil and underground water has rendered many locations unsuitable for traditional cultural and religious purposes.

The CGTO maintains that past, present, and future activities on the NTS have, are, or will disproportionately impact the American Indian people.

5.1.6. Visual Resources

Page 5-45, **ADD** at end of paragraph 2 under Visual Sensitivity .:However, the area is of high visual sensitivity to Indian people, and the Kistler Project would visually disturb neighboring areas that were used in ceremony, thus threatening the use of these areas in any future ceremonies and youth education efforts.

Page 5-46, **ADD** following “moderate visual sensitivity.” in section Summary.: However, the area is of high visual sensitivity to Indian people, and the Kistler Project would visually disturb neighboring areas that were used in ceremony, thus threatening the use of these areas in any future ceremonies and youth education efforts.

5.1.7. Biological Resources

5.1.7.1. Vegetation

Projects and activities on the NTS have impacted plant and animal species in many areas of the NTS. The CGTO has compiled a list of 364 American Indian traditional use plants present on the NTS (DOE 1996: Volume 1, Appendix G, Attachment A). Of the 46 plants listed in Table 3-11 as observed at the proposed lunch site, at least 20 (43%) are Indian traditional use plants. Approximately 14 (70%) of the 20 plants listed in Table 3-12 as observed at the proposed landing and recovery area are Indian traditional use plants. Ground-disturbing and clearing activities associated with construction at the launch site and landing/recovery area, along with impacts of emissions, high temperature exhaust gases and chemicals will adversely affect Indian traditional use plants and surrounding vegetative communities.

5.1.7.2. Wildlife

Page 5-49, lines 2-3, top of page, **DELETE** sentence “This habitat loss would not be expected to adversely affect the local or regional diversity of animal species or populations.”

Page 5-49, last line of paragraph 1, **DELETE** sentence beginning “Vehicle landing and recovery operations are not expected...”

“Page 5-49, last sentence of paragraph 4, **DELETE** “While” from the sentence beginning “While some wildlife species...”; **DELETE** phrase beginning “it is not anticipated...” such that the sentence reads simply “Some wildlife species may exhibit a degree of response.”

Page 5-50, **ADD** text presented below following paragraph 2, above **5.1.8. Water Resources**: Projects and activities on the NTS have impacted plant and animal species in many areas of the NTS. The CGTO has compiled a list of 170 traditional use animals present on the NTS (DOE 1996: Volume 1, Appendix G, Attachment B). All of the animals listed as present at the launch site and landing/recovery area are Indian traditional use animals. Ground-disturbing and clearing activities associated with construction at the launch site and landing/recovery area, along with impacts of emissions, high temperature exhaust gases, sonic booms, chemicals and potential pollution of the pond near the payload processing facility may adversely affect Indian traditional use animals and their habitats.

5.1.8. Water Resources

5.1.8.1. Surface Water

Page 5-51, top of page, **DELETE** sentence beginning with “In addition, the distance of the site...”

Page 5-51, last line of paragraph 2, **DELETE** sentence beginning “The quantity of hydrochloric acid would...”

Page 5-51, **ADD** following paragraph 2, above the sentence beginning “The launch pad is...”: Surface waters of the NTS are used by animals of this region who must drink this water. Water pollution also puts plant communities in jeopardy. Spills of fuel and oil, runoff, and exhaust emission constituents forming hydrochloric acid could thus potentially adversely affect animal habitat in the form of wildlife drinking water sources.

5.1.8.2. Groundwater

Page 5-52, **DELETE** last sentence of paragraph 2 beginning “Therefore, it is not likely...” and **REPLACE** with: Tribal governments are concerned that the migration of polluted groundwater from contaminated areas into land outside the NTS will have long-term adverse effects.

5.1.9. Geology and Soils

Page 5-52, **ADD** below paragraph 1 under the above heading: Severe disturbance of the geology and soils in large portions of the NTS have made certain areas inaccessible to American Indians and unsuitable for traditional cultural and religious purposes.

5.1.9.1. Cultural and Native American Resources

Prehistoric and Historic Resources.

Page 5-54, paragraph 3, line 9 ending with “CFR 800.9(c)(1)).” **ADD:** However, Native American cultural and religious values must also be considered under Section 106 guidelines of the NHPA as amended, in addition to AIRFA, NAGPRA and EO 13007 (see Native American Cultural Resources below).

Native American Cultural Resources.

Page 5-54, third line from bottom of page, **DELETE** sentence beginning “The RCA team recommended a number...” and **REPLACE** with: The RCA team members expressed their opinions regarding whether or not the launch facility should be built on the site. These opinions were (1) the site should not be destroyed by the construction of the Kistler Launch facility because (a) the site is a portion of a larger Indian cultural site, or Traditional Cultural Property, that should be nominated for the NRHP, and is also protectable under Section 106 of the NHPA as amended, the AIRFA, NAGPRA, and E.O. 13007. The associated area potentially has an Indian burial, or was the location of an Indian funeral ceremony, evidenced by a blue bead, pendant fragments, a button, a broken Dutch oven, and several hematite-stained grinding stone fragments of the type that have previously been identified as NAGPRA indicator items. The associated area is a place where a series of historic events that are culturally significant to the cultural traditions of the Indian people of this region occurred. The associated area is a place where feeling, topography, and cultural landscape were a part of its cultural significance. The associated area is surrounded by tonal rocks, ceremonial structures, and Landmark Rock, a unique geological formation that is a power rock in a powerful place.

The RCA team members expressed their opinions regarding whether or not the proposed facility would or could influence the three neighboring Indian sites. These opinions were (2) the launch facility site area is a portion of three neighboring areas, such that a modification of one area potentially impacts all areas according to Indian world view. These neighboring impacts are (a) the Kistler Project would bring people to the site and these people could visit and possibly disturb the archaeological materials of the overall site; (b) the Kistler project would cause noise which would disturb the feeling of the overall area, potentially impact ceremonies that involve tonal rocks and thus sound and acoustic clarity; and (c) the Kistler project would visually disturb neighboring areas that were traditionally used.

It was decided that an Indian RCA of the landing and recovery area would not be conducted until it was certain that the project would come to the NTS. The CGTO knows that the Buckboard Mesa area, including the proposed Kistler landing and recovery area, contains a wide range of important cultural resources, including plants, animals, archaeological sites, minerals, and power places. Three ethnoarchaeological site visits have been conducted in this area. One study was focused on a power rock and a series of petroglyph panels located at the southern end of Buckboard Mesa (Stoffle et al. 1994) and the second study included a visit to rock shelters across Buckboard Mesa Road from site 26NY4892 containing obsidian nodules, artifacts, and Indian rock paintings on the escarpment and the top of the mesa as part of a NAGPRA consultation to determine the disposition of seven obsidian projectile points under the provisions of NAGPRA (Stoffle, Halmo and Dufort 1994:76-82; Stoffle et

al. 1996:66). The third study included a comprehensive American Indian interpretive inventory of the rock art panels at Buckboard Mesa as part of a larger rock art study (Zedeno et al. 1999:35-46). To the north of Buckboard Mesa is an extensive area of obsidian nodules which are significant in many ways to Indian people. Scrugham Peak, a volcanic cone, was preliminarily identified by Indian people as a place of traditional power and ceremony. The mesa is considered to be a power source where people obtained songs and conducted ceremonies, some of which concerned the making of arrow points and incorporated the use of arrow points in the ceremonies.

5.1.12. Cumulative Impacts

Noise

Page 5-63, **DELETE** last sentence of paragraph under **Launch Vehicle Engine Noise** and **REPLACE** with: When considered in the context of the 100,000 sub- and supersonic sorties expected each year at the Nevada Test and Training Range, and the past 50 years of commercial and military flyovers, sonic booms and weapons tests on the NTS, the cumulative effect of noise on plants, animals, geologic formations, and future Indian ceremonies is adverse.

Socioeconomic Factors

Page 5-63, **DELETE** phrase in last sentence of paragraph under **Socioeconomic Factors** beginning “...no disproportionate impacts are anticipated on economically disadvantaged or minority groups.” **ADD** section **Environmental Justice Considerations** and the text presented below under the added heading: According to the CGTO, only the holy lands, **which include the launch facility and recovery zone**, of Indian peoples have been, continue to be, and will be impacted by NTS actions. There is no question that only Indian people have lost cultural traditions because access to places on the NTS has been restricted where ceremonies used to and need to occur, where plants used to and need to be gathered, and where animals used and need to be hunted in a traditional way. American Indian people who belong to the CGTO consider **all** NTS lands to be central in their lives today as these lands have been since creation. The NTS lands are part of the holy lands of Owens Valley Paiute, Western Shoshone, and Southern Paiute peoples. In the Indian view documented in the NTS-EIS, these holy lands have been polluted and their resources damaged by long-term activities. The CGTO believes that the past, present, and future pollution of these holy lands constitutes both Environmental Justice and equity violations. No other people have had holy lands impacted by NTS-related environmental pollution and damage.

One of the most adverse consequences of NTS operations for the survival of American Indian culture, religion, and society has been the restriction of access to their traditional lands and resources. Loss of access to traditional foodstuffs and medicine have greatly contributed to undermining the cultural well-being of Indian people. These Indian people have experienced, and will continue to experience, breakdowns in the process of cultural transmission due to lack of access to NTS lands and resources. In the Indian view documented in the NTS-EIS, no other people have experienced similar cultural survival impacts due to restricted access to the NTS. Land disturbance and irreparable contamination of

the soil and underground water has rendered many locations unsuitable for traditional cultural and religious purposes.

The CGTO maintains that past, present, and future activities on the NTS have, are, or will disproportionately impact the American Indian people.

Biological Resources

Page 5-63, **DELETE** last sentence of paragraph 1 beginning “Consequently, air emissions and noise...” and paragraph 2, lines 3-8 beginning with “The anticipated loss would...” and **REPLACE** with: **The CGTO believes that Kistler project** activities will potentially contribute to cumulative adverse impacts to **NTS** plant and animal communities and habitats **important to** American Indians.

Cultural and Native American Resources

The Kistler Launch facility site, including 26NY10133, is a portion of a larger Indian cultural site, or Traditional Cultural Property, that includes an historic Indian camp or village with abundant evidence of ceremonial and funerary activity, and should be nominated for the NRHP, and is also protectable under Section 106 of the NHPA as amended, the AIRFA, NAGPRA, and E.O. 13007. According to the CGTO, the Buckboard Mesa area, including the proposed Kistler landing and recovery area, contains a wide range of important cultural resources, including plants, animals, archaeological sites, minerals, and power places, a power rock, a series of petroglyph panels, rock shelters, obsidian nodules, artifacts, and an extensive obsidian quarry which are significant in many ways to Indian people. Scrugham Peak, a volcanic cone, was identified by Indian people as a place of traditional power and ceremony. The mesa is considered to be a power source where people obtained songs and conducted ceremonies, some of which concerned the making of arrow points and incorporated the use of arrow points in the ceremonies. Based on an archaeological reconnaissance of the proposed location in July of 1997, DRI determined in consultation with the NSHPO that site 26NY4892, the western portion of which will be bladed to create the Kistler vehicle landing and recovery area, is eligible for nomination to the NRHP under criterion d of 36 CFR Part 60.4 (Holz and Drollinger 1997:4, 15).

The CGTO believes that the Kistler project activities in these areas will contribute to cumulative adverse impacts **on the NTS** to American Indian culture, religion, access, and values. Native American cultural and religious values must be considered under Section 106 guidelines of the NHPA as amended, in addition to AIRFA, NAGPRA and EO 13007.

Findings and Recommendations Deriving from the American Indian Assessments of the Draft EA for the Site, Launch, Reentry and Recovery Operations at the Kistler Launch Facility, Nevada Test Site (NTS)

The CGTO knows that the technology for the Kistler rocket vehicle is currently being tested, and that Kistler must demonstrate the feasibility of the technology by conducting a series of successful launch, reentry and recovery tests before FAA will issue a license to them to construct the project on NTS lands.

Archaeological reconnaissance and data recovery activities were conducted at the proposed launch site (Holz and Beck 1997; Johnson et al. 1999). American Indian monitors participated in the data recovery at the proposed launch site. Archaeological reconnaissance was conducted at the proposed landing and recovery area (Holz and Drollinger 1997). A preliminary site visit and an American Indian rapid cultural assessment were conducted by CGTO representatives at the proposed launch site. Both sites were determined to be eligible for nomination to the NRHP under criterion d of 36 CFR Part 60.4.

It was decided that archaeological data recovery and an Indian RCA would not be conducted at the proposed landing and recovery area until it was certain that the project would come to the NTS. The AIWS was funded by the NTSDC to incorporate Indian text, deriving from previous studies and the RCA of the launch site, into the DEA for the project.

If the project does not come to the NTS, then there will be no adverse impacts. If, however, the project goes forward on the proposed NTS locations, it is recommended by the AIWS that further American Indian cultural resource studies be conducted at all locations where potential project impacts would occur.

Findings

Based on a systematic review of the archaeological survey, data recovery, and Indian RCA reports as well as the Kistler Draft EA, the AIWS concludes that the Kistler Launch facility site, including 26NY10133, is a portion of a larger Indian cultural site, or Traditional Cultural Property (TCP), that includes an historic Indian camp or village with abundant evidence of ceremonial and funerary activity, and should be nominated for the National Register of Historic Places, and may also be protectable under Section 106 of the NHPA as amended, the AIRFA, NAGPRA, and E.O. 13007. The proposed landing and recovery area near Buckboard Mesa may also qualify as a Traditional Cultural Property that is eligible for nomination to the NRHP, and may also be protectable under Section 106 of the NHPA as amended, the AIRFA, NAGPRA, and E.O. 13007. However, in order to validate these conclusions, two elders from each of the CGTO member tribes must visit the sites as part of a systematic ethnographic overview and assessment to determine whether the sites are mitigatable or unmitigatable.

Based on a systematic review of the archaeological survey, data recovery, and Indian RCA

reports as well as the Kistler Draft EA, the AIWS, as representatives of the CGTO, finds that:

1. The proposed project locations, including sites 26NY10133 and 26NY4892 and associated areas, have been determined to be sacred sites under EO 13007. The locations may also qualify as Traditional Cultural Properties eligible for nomination to the NRHP. The locations may also be protectable under Section 106 of the NHPA as amended, the AIRFA, and NAGPRA.
2. The AIWS disagrees with the conclusions of the Kistler DEA and the “Proposed Finding of No Significant Impact,” published in the Federal Register (65:78, 21495-21498) on April 21, 2000.
3. There will be a significant adverse impacts (project-specific and cumulative) to American Indian culture, religion and values should the project go forward at the proposed locations.

Recommendations

It is clear that conducting any further investigations will be predicated on whether or not the Kistler project will actually come to the NTS. In the event it is determined that the Kistler project will come to the NTS, the AIWS, as representatives of the CGTO, recommend the actions presented below.

Project-Specific Recommendations

The AIWS recommends that, in the event it is determined that the Kistler project will be constructed on the NTS:

- 1. Prior to the beginning of Kistler Project activities, systematic ethnographic studies will be conducted at both the proposed launch and landing/recovery sites in order to collect any and all new information that heretofore has not been documented in existing studies of the proposed locations. These studies shall include, but not be limited to, ethnoarchaeology, ethnobotany, ethnobiology, ethnography, ethnohistory and TCP investigations. CGTO elders, members of the AIWS, and UofA ethnographers will be funded to participate in these studies.**
- 2. That each of the proposed sites be visited by CGTO elders and NAGPRA subgroup members to determine the NAGPRA status of items recovered from each of the proposed locations by DRI; furthermore, that NAGPRA subgroup members and CGTO elders view the indicator items recovered from each of the proposed sites, along with any other artifacts recovered, to make final NAGPRA disposition determinations as part of a NAGPRA consultation, to be funded by the FAA, NTSDC, DOE/NV, Kistler Aerospace Corporation, or any combination thereof.**
- 2. The determination of appropriate mitigation strategies can ONLY be determined following systematic studies involving elders visiting the sites to identify and evaluate the nature of the**

sites and their cultural resources and determine the mitigatability of each site.

3. In the event a final determination is made that an EIS is not warranted, the AIWS recommends the following series of actions and mitigation strategies at all project locations as part of a “Mitigated Finding of No Significant Impact” and accompanying American Indian Cultural Resource Mitigation and Monitoring Plan to be published in the Federal Register.

- A) Systematic ethnographic studies are to be conducted at both the proposed launch and landing/recovery sites. These studies shall include, but not be limited to, ethnoarchaeology, ethnobotany, ethnobiology, ethnography, ethnohistory and TCP investigations. These studies will be funded by the FAA, NTSDC, and Kistler Aerospace Corporation, or any combination thereof, and conducted in the event there is a final determination that the project will go forward on the proposed NTS locations.
- B) The determination of appropriate mitigation strategies can ONLY be determined following systematic studies involving elders visiting the sites to identify and evaluate the nature of the sites and their cultural resources and determine the mitigatability of each site.
- C) Following the completion of the ethnographic overview and assessment studies involving elder site visits to all proposed project locations--and prior to any project construction--representatives of the CGTO, FAA, DOE/NV, Kistler Aerospace Corporation, NTSDC, and any technical assistance personnel shall meet at a location to be determined to discuss the development and implementation of an *American Indian Cultural Resource Mitigation and Monitoring Plan* which shall include, but not be limited to, the following recommended actions and strategies for protecting American Indian values and places and resources of cultural and religious significance:
 - 1) Any landscape modification should be done in consultation with the CGTO.
 - 2) Prior to any construction activities at either location, Indian religious leaders from the CGTO shall be allowed to visit the sites to conduct ceremonies and prayers.
 - 3) Any construction or ground-disturbing activities associated with the project shall be accompanied by compensated Indian monitors from the CGTO.
 - 4) All workers associated with the project shall be trained to become familiar with legislation and Federal policies and procedures regarding proper treatment and behavior toward conduct on NTS lands and with regard to American Indian cultural resources and significant places.

Workers shall also receive NAGPRA indicator item training.

- 5) All areas outside of the project boundaries and surrounding areas shall be placed strictly off-limits to all project workers.
- 6) Access to surrounding areas shall continue to be assured for Indian people interested in conducting ceremonies or youth education.
- 7) All phases of project activity must be monitored by American Indian monitors.

Specific stipulated actions and strategies as part of the American Indian Cultural Resource Mitigation and Monitoring Plan shall include, but not be limited to, the following:

Artifacts

1. Leave artifacts in place. Any infractions will result in corrective or disciplinary action by the appropriate authorities, and shall result in the permanent removal of the individual (s) from NTS property. Any project activity that uncovers artifacts accidentally must be reported to the CGTO immediately.
2. Information about cultural resource sites must remain confidential unless authorization is expressly given by the CGTO.
3. All archaeological sites immediately beyond project boundaries must be avoided and made strictly off-limits to all project personnel. Any infractions will result in corrective or disciplinary action by the appropriate authorities, and shall result in the permanent removal of the individual (s) from NTS property.
4. Tribal representatives will be permitted access to view areas of cultural importance.
5. All disturbed areas in immediate proximity to the actual project facilities must be reclaimed and restored to the extent possible. CGTO representatives must be included to assist environmental restoration teams who are responsible for reclaiming or restoring disturbed areas.

Petroglyphs and Pictographs

1. Petroglyphs and pictographs have been located in the proposed landing and recovery area. All petroglyphs and pictographs, and the areas in which they are located, must be avoided and made strictly off-limits to all project personnel. Any infractions will result in corrective or disciplinary action by the appropriate authorities, and shall result in the permanent removal of the individual(s) from NTS property.

Plants

1. Plant species identified as important to American Indian culture and religion will be avoided and/or protected from all project activities to the extent feasible.
2. All information about cultural and religious uses of plants must be restricted unless express permission is given by the CGTO.
3. The CGTO requests copies of all biological survey reports, including hydrology, of the proposed project locations conducted by Bechtel and/or others.
4. Indian people have deep knowledge of the biological resources of the area and should participate directly with scientists responsible for the protection of biological resources.

Animals

1. All project activities shall avoid or minimize harmful effects to all animals and habitats to the extent feasible.
2. All water sources, including ponds, tanks, and runoff sloughs must be maintained in a clean condition to allow animal access. In the event of spills, accidents, or contamination, all water sources must be secured to restrict animal access for their protection.

Sacred Sites and Traditional Cultural Properties

1. CGTO representatives have extensive knowledge about religious, cultural and /or historic places on the NTS that are important to the culturally affiliated Indian peoples. All springs, powerful sites, and other sensitive areas must be completely avoided by all project activities to the extent feasible. Infringement on sensitive locations must be minimized to the fullest extent possible in the event total avoidance is not feasible. Any activity at such locations must be preceded by visitation by compensated religious leaders of the CGTO to perform the appropriate prayers and ceremonies. All project workers must remain within the project boundaries or “footprint” of the project site. All surrounding areas immediately proximal to the project sites are to remain strictly off-limits to all project personnel. Any infractions will result in corrective or disciplinary action by the appropriate authorities, and shall result in the permanent removal of the individual(s) from NTS property.
2. As mentioned in project-specific recommendations, comprehensive TCP studies must be conducted in all proposed project locations. CGTO representatives and elders must be participants and compensated accordingly to identify sensitive areas with an appropriate buffer zone and/or easements so access to non-Indian individuals can be restricted and/or prevented.
3. All information about places of cultural and religious significance must be kept strictly confidential unless express permission is given by the CGTO.

Burials and Associated Cultural Items

1. The CGTO is responsible for all burials of culturally affiliated Indian people on the NTS. It is the right and duty of Indian people to make any decision concerning an Indian burial. In the event an Indian burial is encountered during any project activity, work shall immediately cease and the DOE/NV and the CGTO immediately notified under the provisions of NAGPRA. DOE/NV, FAA, NTSDC and Kistler Aerospace Corporation, or some combination thereof, will provide the necessary compensation for CGTO representatives and elders to visit the site to inspect it. CGTO representatives demand that any burial discovered during project activities be left completely undisturbed and the site placed strictly off-limits to all project personnel. Any infractions will result in corrective or disciplinary action by the appropriate authorities, and shall result in the permanent removal of the individual(s) from NTS property. Violators will be further subject to appropriate penalties set forth in Federal cultural resource protection legislation. Any project activity that disturbs a burial location must be moved to another

location.

2. In the event certain items that have been previously determined by the CGTO to be NAGPRA indicator items (i.e., those that indicate a possible burial or funerary ceremony) in previous consultations are encountered during project activities, the DOE/NV and CGTO must be immediately notified. These items include, but are not necessarily limited to, beads, buttons, pendant or ornament fragments, “killed pots” (whole vessels with a hole in the bottom), any artifact stained with red hematite pigment (e.g., ground stone), or any other item that appears to have been ceremonially “cached.” Upon discovery, these items must be left in place. DOE/NV, FAA, NTSDC, and Kistler Aerospace Corporation, or some combination thereof, will provide the necessary compensation for CGTO representatives and elders to visit the site to inspect it. CGTO representatives demand that any indicator items discovered during project activities be left completely undisturbed and the site placed strictly off-limits to all project personnel until a final determination as to the disposition of the item(s) can be made by CGTO representatives. Any infractions will result in corrective or disciplinary action by the appropriate authorities, and shall result in the permanent removal of the individual(s) from NTS property.

3. Any information about human remains and indicator items shall be kept strictly confidential unless express permission is given by the CGTO.

4. Any objects identified by CGTO representatives as associated with a burial or funeral must be left alone and kept strictly off-limits to all project personnel until a final determination as to the disposition of the item(s) can be made by CGTO representatives. Any infractions will result in corrective or disciplinary action by the appropriate authorities, and shall result in the permanent removal of the individual(s) from NTS property.

5. Any objects, including human remains, associated with a burial or funeral, which have been removed or collected from its original location shall be immediately subject to formal NAGPRA consultation, repatriated, and returned as soon as feasible to a suitable location designated by the CGTO. DOE/NV, FAA, NTSDC, and Kistler Corporation, or some combination thereof, will provide the necessary compensation for CGTO representatives and elders for these purposes.

6. Access to the NTS shall be granted to CGTO representatives who wish to participate in cultural ceremonies when returning human remains or associated objects.

7. DOE/NV, FAA, NTSDC, and Kistler Aerospace Corporation, or some combination thereof, will take full responsibility for any costs associated with the return and/or reburial of such items.

General Recommendations

1. As has previously been agreed between the CGTO-AIWS and the FAA, all Indian text shall be incorporated into the Kistler EA *as produced* by the AIWS in the revised document dated 9/15/00.

2. As has previously been agreed between the CGTO-AIWS and the FAA, the report entitled

Paa'oatsa Hunuvi (Water Bottle Canyon): American Indian Rapid Cultural Assessment of Archaeological Site 26NY10133, Nevada Test Site (Arnold et al. 1998), shall be included as an appendix to the Kistler EA in its entirety.

3. Members of the AIWS and cultural resource specialists from the University of Arizona should be added to the list of preparers for the EA.

4. The FAA and DOE/NV must remain engaged in formal, government-to-government consultation with the CGTO, providing continual updates on the status of ALL project activities as appropriate, as set forth in the provisions of the NHPA as amended, the AIRFA, NAGPRA, Executive Orders 13084 and 13007 and the DOE American Indian Policy as revised, according to the consultation model set forth in the NTS-EIS (DOE 1996: Volume 1, Appendix G, Attachment C:C-1-C-13).

References Cited

- American Indian Transportation Committee, with R. Stoffle, R. Toupal and H. Ilahiane
1999 Field Assessment of Cultural Sites Regarding the U. S. Department of Energy Preapproval Draft Environmental Assessment of Intermodal Transportation of Low-Level Radioactive Waste to the Nevada Test Site. Report prepared for US Department of Energy. Tucson: Bureau of Applied Research in Anthropology, University of Arizona.
- American Indian Writers Subgroup, Consolidated Group of Tribes and Organizations
1996 American Indian Assessments: Environmental Impact Statement for Nevada Test Site and Off-Site Locations in the State of Nevada, A Native American Resource Document. Report prepared for US Department of Energy Nevada Operations Office. Tucson: Bureau of Applied Research in Anthropology, University of Arizona for the Consolidated Group of Tribes and Organizations.
- Arnold, Richard, Don Cloquet, Betty Cornelius, Maurice Frank, Glen Hooper, Gaylene Moose and Neddeen Naylor
1996 Voicing American Indian Concerns through an Indian EIS Writing Team. Paper presented at the annual meeting of the National Association of Environmental Professionals, Houston, TX, June 2-6.
- Arnold, Richard, D. Cloquet, B. Cornelius, M. Frank, and G. Moose, with R. Stoffle
1997 *Tevitsi Yakakante (It is Crying Hard): American Indian Rapid Cultural Assessment of DOE Nevada Operations Office Environmental Restoration Activities at Double Tracks, Clean Slate, and the Central Nevada Test Area.* Report prepared for Environmental Restoration Division, US Department of Energy, Nevada Operations Office. Tucson: Bureau of Applied Research in Anthropology, University of Arizona.
- Arnold, Richard, D. Cloquet, B. Cornelius, M. Frank, and G. Moose, with R. Stoffle and G. Dewey-Hefley
1998 *Paa'oatsa Hunuvi (Water Bottle Canyon): American Indian Rapid Cultural Assessment of Archaeological Site 26NY10133, Nevada Test Site.* Report prepared for Environment, Safety and Health Division, US Department of Energy, Nevada Operations Office. Tucson: Bureau of Applied Research in Anthropology, University of Arizona.
- Austin, Diane E., ed.
1998 Native Americans Respond to the Transportation of Low-Level Radioactive Waste to the Nevada Test Site. Report prepared for US Department of Energy, Nevada Operations Office. Tucson: Bureau of Applied Research in Anthropology, University of Arizona.

Brooks, Richard H.

- n.d. Archaeological Report on the Central Nevada Test Site, Nye County, Nevada. Nevada Archaeological Survey, Desert Research Institute and University of Nevada, Las Vegas.

Edwards, Susan R. and William Gray Johnson

- 1994 A Status Report on the Hot Creek Archaeological Collection (Project Faultless Area, Nye County, Nevada). Las Vegas: Desert Research Institute Quaternary Sciences Center.

Holz, Barbara A. and Colleen M. Beck

- 1997 A Class III Cultural Resources Reconnaissance of the Proposed Launch Site for the Kistler Project in Areas 18 and 19, Nevada Test Site, Nye County, Nevada. DRI Short Report SR042297-1, NTS Project #9711MA. Las Vegas: Desert Research Institute.

Holz, Barbara A. and Harold Drollinger

- 1997 A Class III Cultural Resources Reconnaissance of the Proposed Vehicle Recovery Location for the Kistler Aerospace Project in Area 18, Nevada Test Site, Nye County, Nevada. DRI Short Report SR072897-1, NTS Project #972118. Las Vegas: Desert Research Institute.

Stoffle, Richard W.

- 1987 Native Americans and Nuclear Waste Storage at Yucca Mountain, Nevada: Potential Impacts of Site Characterization Activities. Report prepared for Science Applications International Corporation. Ann Arbor: Institute for Social Research, University of Michigan.

Stoffle, Richard W. and Michael J. Evans

- 1988 American Indians and Nuclear Waste Storage: The Debate at Yucca Mountain, Nevada. *Policy Studies Journal* 16(4):751-767.
- 1990 Holistic Conservation and Cultural Triage: American Indian Perspectives on Cultural Resources. *Human Organization* 49(2):91-99.
- 1992 Native Americans and Nuclear Waste Storage: The Debate at Yucca Mountain, Nevada. In *Native Americans and Public Policy*. F. Lyden and L. Letgers, eds. Pp. 243-262. Pittsburgh: University of Pittsburgh Press.

Stoffle, Richard W., Michael J. Evans, David B. Halmo, Wesley E. Niles, and Joan T. O'Farrell

- 1989 Native American Plant Resources in the Yucca Mountain Area, Nevada. Interim report prepared for US Department of Energy Nevada Operations Office. Las Vegas: Science Applications International Corporation.

- Stoffle, Richard W., Michael J. Evans, David B. Halmo, and John E. Olmsted
1988 Annual Report, Native American Cultural Resource Studies, Yucca Mountain, Nevada. Report prepared for Science Applications International Corporation and the US Department of Energy Nevada Operations Office. Ann Arbor: Institute for Social Research, University of Michigan.
- Stoffle, Richard W., Michael J. Evans, David B. Halmo, Molly E. Dufort, and Brian K. Fulfroost, with Patrick Leary
1994 Native American Cultural Resources on Pahute and Rainier Mesas, Nevada Test Site. Desert Research Institute Technical Report No. 84. Reno: Desert Research Institute, University of Nevada.
- Stoffle, Richard W., Michael J. Evans and Camilla Harshbarger
1989 Native American Interpretation of Cultural Resources in the Area of Yucca Mountain, Nevada. Interim report prepared for US Department of Energy Nevada Operations Office. Las Vegas: Science Applications International Corporation.
- Stoffle, Richard W., David B. Halmo and Molly C. Dufort
1994 NAGPRA Consultation and the Nevada Test Site Collection, Final Report of Subgroup Activities. Report prepared for the NAGPRA Subgroup, Consolidated Group of Tribes and Organizations, the Desert Research Institute and the US Department of Energy Nevada Operations Office. Tucson: Bureau of Applied Research in Anthropology, University of Arizona.
- Stoffle, Richard W., David B. Halmo, Michael J. Evans, and John E. Olmsted
1990 Calculating the Cultural Significance of American Indian Plants: Paiute and Shoshone Ethnobotany at Yucca Mountain, Nevada. *American Anthropologist* 92:416-432.
- Stoffle, Richard W., David B. Halmo, John E. Olmsted and Michael J. Evans
1990 Native American Cultural Resource Studies at Yucca Mountain, Nevada. Ann Arbor: Institute for Social Research, University of Michigan.
- Stoffle, Richard W., John E. Olmsted and Michael J. Evans
1990 Literature Review and Ethnohistory of Native American Occupancy and Use of the Yucca Mountain Area. Interim report prepared for US Department of Energy Nevada Operations Office. Las Vegas: Science Applications International Corporation.
- Stoffle, Richard W., M. Nieves Zedeno, Diane E. Austin and David B. Halmo
1996 Native American Graves Protection and Repatriation Act Consultation and the Nevada Test Site Collection. Desert Research Institute Technical Report No. 89. Las Vegas: Desert Research Institute.

- 1996 Native American Graves Protection and Repatriation Act Consultation and the Nevada Test Site Collection: Executive Summary. Report prepared for the Consolidated Group of Tribes and Organizations, the Desert Research Institute and the US Department of Energy, Nevada Operations Office. Tucson: Bureau of Applied Research in Anthropology, University of Arizona.

United States Department of Energy, Nevada Operations Office, with significant contributions from the Consolidated Group of Tribes and Organizations

- 1996 Final Environmental Impact Statement for the Nevada Test Site and Off-Site Locations in the State of Nevada. Volume 1, Appendix G, American Indian Assessments: Final Environmental Impact Statement for the Nevada Test Site and Off-Site Locations in the State of Nevada. Las Vegas: US Department of Energy, Nevada Operations Office.

Zedeno, M. Nieves and Richard W. Stoffle

- 1999 Native American Graves Protection and Repatriation Act Consultation: Worman and McKinnis Collections, Nevada Test Site and Hot Creek Valley Collection, Central Nevada Test Area. Report prepared for Environment, Safety and Health Division, US Department of Energy, Nevada Operations Office. Tucson: Bureau of Applied Research in Anthropology, University of Arizona.

Zedeno, M. Nieves, Richard W. Stoffle, Genevieve Dewey, and David Shaul, with Maria Banks and Tom Fenn

- 1999 Storied Rocks: American Indian Inventory and Interpretation of Rock Art on the Nevada Test Site. Desert Research Institute Technical Report No. 93. Las Vegas: Desert Research Institute.

ADDITIONAL REFERENCES MAY BE FOUND IN ARNOLD ET AL. 1998